AUTODOC CLUB

How to change front brake caliper on **BMW X3 (E83)** – replacement guide

SIMILAR VIDEO TUTORIAL

This video shows the replacement procedure of a similar car part on another vehicle

Important!

This replacement procedure can be used for:
BMW X3 (E83) 3.0 sd, BMW X3 (E83) xDrive 35 d

The steps may slightly vary depending on the car design.

This tutorial was created based on the replacement procedure for a similar car part on: BMW 5 Saloon (E39) 530i 3.0

REPLACEMENT: BRAKE CALIPER – BMW X3 (E83).
TOOLS YOU'LL NEED:

- Wire brush
- WD-40 spray
- Brake cleaner
- Copper grease
- Brake caliper guide pins grease
- HEX bit no.H7.
- Flare nut spanner №11
- Flare nut spanner №14
- Wheel impact socket #17
- Ratchet wrench
- Torque wrench
- Crow bar
- Flat Screwdriver
- Brake hose clip
- Brake bleeder kit
- Wheel chock

Buy tools

Replacement: brake caliper – BMW X3 (E83). AUTODOC recommends:

- The replacement procedure is identical for the left and right brake calipers on the same axle.
- All work should be done with the engine stopped.

REPLACEMENT: BRAKE CALIPER – BMW X3 (E83). RECOMMENDED SEQUENCE OF STEPS:

1 Open the bonnet. Unscrew the brake fluid reservoir cap.

2 Secure the wheels with chocks.

3 Loosen the wheel mounting bolts. Use wheel impact socket #17.

4 Raise the front of the car and secure on supports.

5 Unscrew the wheel bolts.

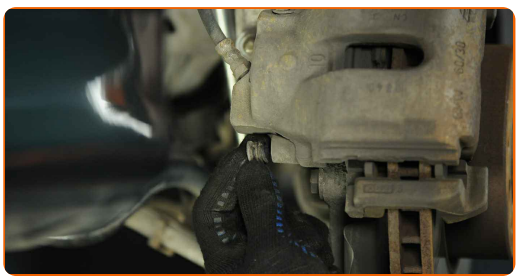
Replacement: brake caliper – BMW X3 (E83). Tip:

- To avoid injury, hold up the wheel when unscrewing the bolts.

6 Remove the wheel.

7 Detach the brake caliper retaining spring. Use a flat screwdriver.

8 Remove the dust boot caps of the brake caliper guide pins. Use a flat screwdriver.



9 Spread the brake pads. Use a crowbar.

10 Clean the brake caliper fasteners. Use a wire brush. Use WD-40 spray.

11 Unscrew the brake caliper fastening. Use HEX No.H7. Use a ratchet wrench.

12 Remove the guide pins from the brake caliper.

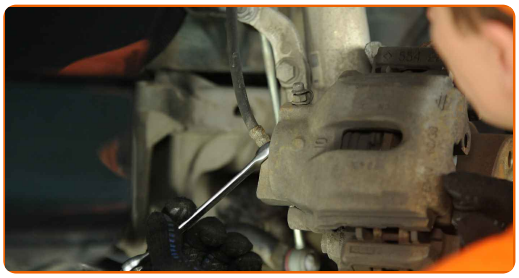
13 Clamp the brake hose off using a brake hose clamp.

14 Clean the area where the brake hose is connected to the caliper, and the guide pins area. Use a brake cleaner.

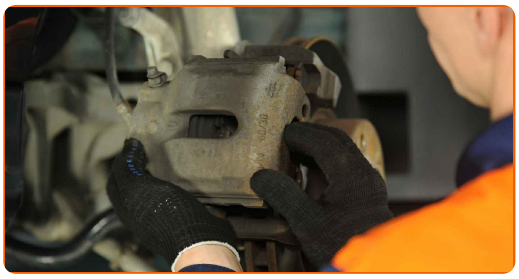
AUTODOC recommends:

- Replacement: brake caliper – BMW X3 (E83). After applying the spray, wait a few minutes.

15 Loosen the brake hose fastening. Use a flare nut spanner #14.



16 Remove the brake caliper.

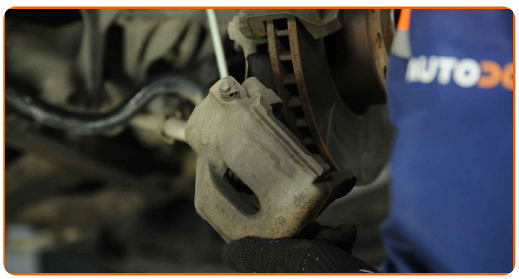


Replacement: brake caliper – BMW X3 (E83). Tip from AUTODOC experts:

- When replacing the brake caliper, it is recommended to check the brake hose for damages and, if necessary, to replace it with a new one.
- When replacing a brake caliper it is recommended to replace brake pads, check the state of the brake discs and replace them with new ones if necessary.
- Check the brake caliper bracket, brake caliper guide pins and boots. Clean them. Replace, if necessary.
- Don't press the brake pedal after the brake caliper has been removed. As a result, the piston can fall out from the brake cylinder, and brake fluid leakage and depressurization of the system may occur.

17 Remove the brake pads.

18 Unscrew the brake hose from the brake caliper.



19 Disconnect the brake hose.

20 Treat the brake hose. Use a brake cleaner.

Replacement: brake caliper – BMW X3 (E83). AUTODOC recommends:

- After applying the spray, wait a few minutes.

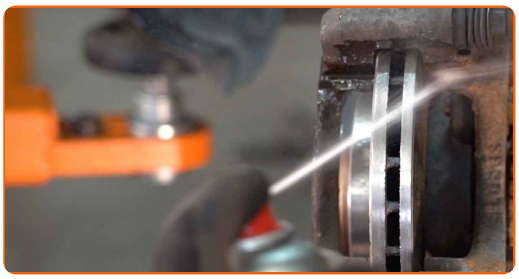
21 Install and fix the brake hose into a new caliper.

22 Install the brake pads.

Replacement: brake caliper – BMW X3 (E83). AUTODOC experts recommend:

- If going to use the old brake pads, clean them.

23 Clean the brake caliper bracket from dirt and dust. Use a wire brush. Use a brake cleaner.



AUTODOC recommends:

- Replacement: brake caliper – BMW X3 (E83). After applying the spray, wait a few minutes.

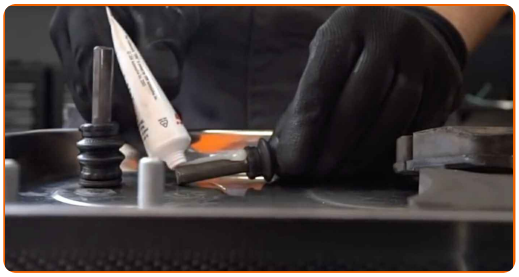
24 Install the brake caliper and fix it.

25 Tighten the fastener connecting the brake pipe to the brake caliper. Use a flare nut spanner #14. Use a torque wrench. Tighten it to 22 Nm torque.

26 Remove the brake hose clamp.

27 Clean the brake caliper guide pins.

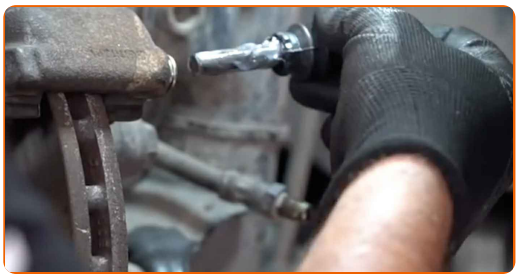
28 Treat the brake caliper guide pins. Use the brake caliper guide pin grease.



Replacement: brake caliper – BMW X3 (E83). Professionals recommend:

- If no new guide pins were supplied in a kit with the new brake calipers, use the old pins.

29 Screw in the guide pins.



30 Tighten the brake caliper fasteners. Use HEX No.H7. Use a torque wrench. Tighten it to 30 Nm torque.

31 Install the dust boot caps of the brake caliper guide pins.

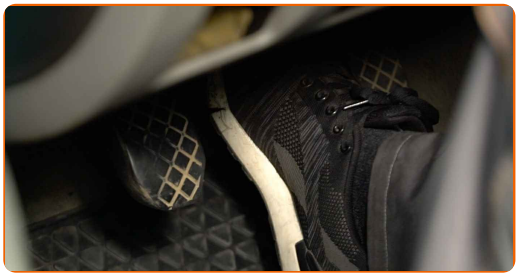
32 Install the brake caliper retaining spring. Use a flat screwdriver.

33 Connect the brake bleeder kit to the brake bleeder screw.

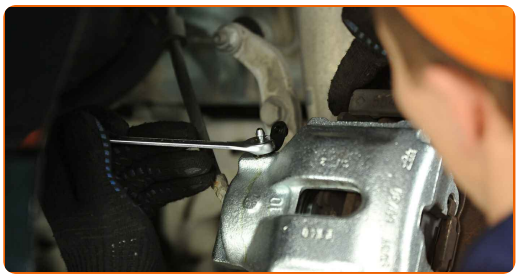
34 Undo the brake bleeder screw. Use a flare nut spanner #11.

35.1 Bleed the brake caliper system.

35.2 Without starting the engine, press the brake pedal several times until you feel significant resistance.

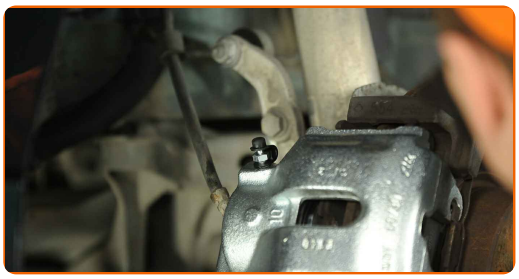


36 Tighten the brake caliper bleed screw. Use a flare nut spanner #11. Use a torque wrench. Tighten it to 13 Nm torque.



37 Disconnect the brake bleeder kit.

38 Clean dirt from the brake hose bolt. Use a brake cleaner.



Replacement: brake caliper – BMW X3 (E83). Tip from AUTODOC:

- After applying the spray, wait a few minutes.

39 Treat the surface where the brake disc contacts the wheel rim. Use copper grease.

40 Clean the brake disk surface. Use a brake cleaner.

AUTODOC recommends:

- Replacement: brake caliper – BMW X3 (E83). After applying the spray, wait a few minutes.

41 Install the wheel.

Replacement: brake caliper – BMW X3 (E83). Tip from AUTODOC:

- To avoid injury, hold up the wheel when screwing in the fastening bolts.

42 Screw in the wheel bolts. Use wheel impact socket #17.

43 Lower the car and working in a cross order, tighten the wheel bolts. Use wheel impact socket #17. Use a torque wrench. Tighten it to 120 nm torque.

44 Remove the jacks and chocks.

AUTODOC recommends:

- Important! Replacement: brake caliper – BMW X3 (E83). Check the brake fluid level in the reservoir and top up if necessary.

45 Tighten the brake fluid reservoir cap. Close the hood.

WELL DONE!

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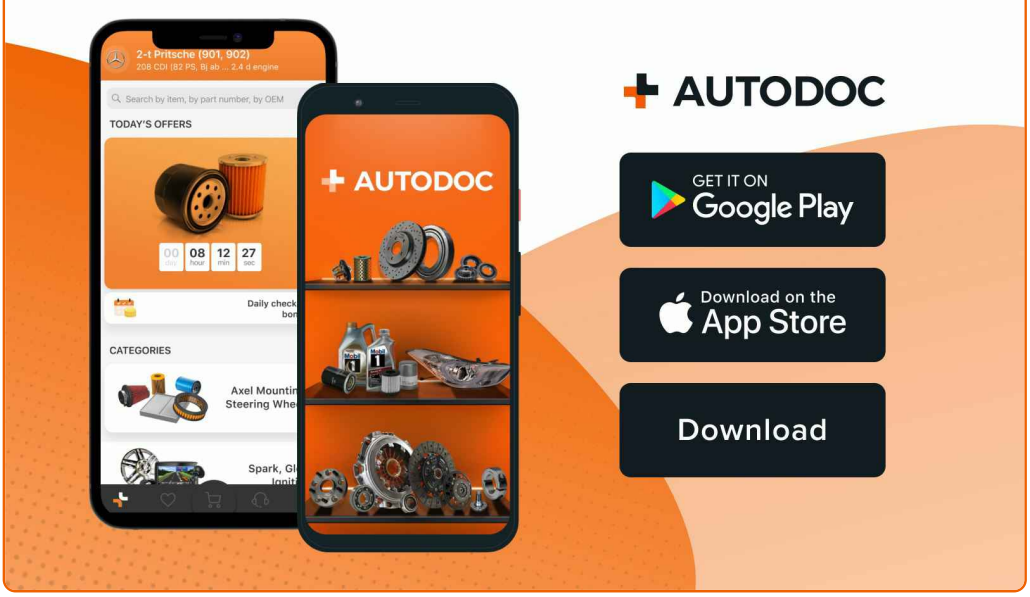

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BRAKE CALIPER: A WIDE SELECTION

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